Cases of Influenza Reported in Extra-Cantonment Zones—Continued.

State and zone.	Cases reported week ended—							
	Sept. 14.	Sept. 21.	Sept. 28.	Oct. 5.	Oct. 12.	Oct. 19.	Oct. 26.	Nov. 2.
Georgia:								
Gas and Flame School	.....	.....	.....	51	730	1,468	1,257	531
Gordon	.....	.....	.....	.....	844	1,598	707	372
Hancock	.....	6	3	35	371	337	244	281
Picric acid plant	.....	.....	.....	264	150	248	81	42
Wheeler	.....	.....	.....	26	152	880	932	522
Florida: Johnston	.....	.....	3	198	2,944	1,750	541	233
Kentucky and Indiana: Taylor	.....	.....	3	380	3,620	3,772	2,082	1,146
Georgia and Tennessee: Oglethorpe	.....	.....	3	31	880	2,203	527	73
Alabama:								
McClellan	.....	.....	.....	69	609	577	331	232
Sheridan	.....	.....	3	6	220	256	75	55
Mississippi:								
Gulfport health district	.....	.....	.....	453	1,161	1,450	1,614	753
Shelby	.....	.....	.....	50	252	300	289	107
Arkansas:								
Eberts	.....	2	48	89	695	450	378	219
Pike	.....	.....	34	1,285	4,299	3,137	651	324
Louisiana: Beauregard	.....	.....	12	212	866	1,735	620	253
Oklahoma: Doniphan	.....	.....	.....	6	13	117	160	12
Texas:								
Bowie	.....	.....	119	505	316	241	132	68
Logan	.....	.....	24	.....	125	175	144	341
MacArthur	.....	1	1	65	281	313	404	233
Travis	.....	1	2	265	861	2,476	2,176	844
Washington:								
Bremerton	.....	.....	.....	.....	12	457	.....	.....
Lewis	.....	.....	3	.....	9	46	77	72
Vancouver	.....	.....	.....	.....	.....	593	.....	.....

INFLUENZA IN EUROPE.

Because of the present great interest in the occurrence of influenza, and the inaccessibility of most foreign medical journals, it has been thought advisable to reproduce the following excerpts from the August number of Bulletin Mensuel Office International d'Hygiène Publique:

Spanish Grippe in the Netherlands.

[Nederlandsch Tijdschrift voor Geneeskunde, July 13, 1918, pp. 108 and 111.]

The Netherlands seem so far (July, 1918) to have been spared by the epidemic, but some cases have been reported among British soldiers interned in a camp at Groningen; 38 cases were observed at Losser; some at Ecluse (among troops), at Dalen, and at Rotterdam. The central board of health addressed a circular to physicians requesting them to report as promptly as possible any cases coming under their observation, as well as any epidemiological or other data concerning the epidemic.

In the same number of the Nederlandsch Tijdschrift voor Geneeskunde (p. 106) indications are given relative to the grippe in Berlin. Cases are stated to be very common but not grave. The clinical picture presented is the same as elsewhere: Sudden onset, high fever, lassitude, pain in the head, back, and limbs, often light bronchitis and laryngitis. The malady is not distinguishable from influenza,

although the specific bacillus has not been discovered, this being doubtless due to the slight degree of intensity in the bronchial symptoms.

Grippe in Switzerland.

[Bulletin du Service Suisse de l'Hygiène publique, July 13 and 20, 1918, pp. 312 and 317.]

The so-called Spanish grippe became prevalent in Switzerland toward the end of June, 1918, after having invaded a number of European countries, originating probably at the fronts of the several combating armies. There seems to be no doubt that we have to do with an epidemic of influenza the progress and clinical manifestations of which resemble those observed in the pandemic 1889–1894. To the present time the disease has continued to be benign, except in the case of certain fatal pulmonary complications, cases prolonged by relapses or various sequelæ, and cases supervening on pre-existing affections which they aggravate.

The infectious germs are found in the sputum of patients and their nasal and pharyngeal mucosa. They are propagated in general directly from individual to individual by means of droplets emitted in coughing, etc. Consequently, the proximity of patients should be avoided and handkerchiefs and other articles which have been soiled by patients should be disinfected.

It is evident that given the extreme prevalence of the disease its prophylaxis is very difficult. Precautions may be taken, however, and in this connection we may recall the recommendations presented by F. Schmid in his work on the epidemic of 1889–90. Careful hygiene of the mouth and the use of antiseptic gargles may be recommended to all. Persons predisposed to catarrhs of the air passages should refrain from participating in assemblages held in closed places; in general, the gatherings of people in crowds, as in theatrical representations, etc., should be prohibited.

Note on Grippe in Switzerland.

[By Jules Renault, Bull. Acad. de Médicine, Vol. LXXX, No. 31 (session of Aug. 6, 1918), p. 153.]

Dr. Jules Renault had occasion in the course of a mission in Switzerland, to study the epidemic of grippe now prevailing in that country and which has from the outset presented a peculiarly grave character due mainly to frequent pulmonary complications. The serious consequences of these complications and the mortality resulting from them gave rise to the belief among the public that we were in the presence of a peculiarly grave epidemic. In reality we have to consider it simply as a grippe epidemic.

Bacteriological examinations of the bronchial secretions in the uncomplicated forms has in some cases demonstrated the Pfeiffer bacillus, which is not found in pulmonary complications. In these

latter cases the pneumococcus, or the small chain diplococcus has been constantly present during life and after death. These latter agents have also been found in the blood cultures.

The various observations, anatomo-pathologic and bacteriologic, made during the present epidemic, recall in all respects those made at the time of the influenza epidemic of 1889–90 and coincide completely with those made recently in Italy, Spain, France, and wherever else the present pandemic designated as "Spanish" grippe and which seems to represent only a revival of virulence in the uninterrupted course of the old grippe of 1889–90, has been present.

In spite of its extreme diffusion, the affection is one which is relatively not very grave and for which quarantine and disinfection on the frontier would be unjustifiable and useless.

The risk of contagion may be diminished by individual care of the nasal passages and throat and especially by avoiding visiting patients and participating at large assemblies. The risk of pulmonary complications may be considerably diminished by sedulous care from the outset of the disease and for as long a time thereafter as may be necessary.

At the session of the Academy of Medicine of August 13, 1918, Dr. F. Bezancon, referring to the communication of Dr. J. Renault, stated that he had observed a number of cases of grippe in the French repatriated from Switzerland. These cases were in all respects comparable with the cases of epidemic influenza observed in 1889. They owed their gravity to the frequency and severity of broncho-pulmonary and pleural complications. As in former epidemics, the present grippe exhibits the pneumococcus as the predominant microbe.

The autocthonic epidemics observed during the month of May, 1918, among the military and in workshop employees have in general been markedly benign.

In certain foci the predominance of gastro-intestinal troubles, suddenness of attack, and the number of cases occurring within a few hours of each other, have suggested the possibility of a collective alimentary intoxication.

Among the rather special complications observed one of the most curious was the rather sudden appearance in a number of cases of herpes zoster as a sequel of the grippe. More than a dozen of such cases were observed in the course of a month.

The Nature of the Present Epidemic.

[Il Policlinico July 28, 1918, p. 713.]

Although it made its first recognized appearance in Spain, where from the outset it spread extensively and rapidly, the exact origin of the disease which has become pandemic in most of the countries in Europe is not known. The name "influenza" is convenient and has

been largely applied to the disease, but within the knowledge of the writer of this article the specific bacillus has almost never been discovered. Many authors have spoken of dengue, many also of pappataci fever, some of trench fever.

A very clear statement of the question has been made by Sampietro in the Annali d'Igiene of June 30, 1918. The symptoms, course, prevalence, pathogenic agent, and mode of transmission of the several diseases considered are summed up by him in a comparative table. What he says of influenza (variable onset, symptomatology diverse, but with preponderance of catarrhal phenomena especially of the respiratory passages, irregular course, pathogenic agents, mode of transmission) is evidently not in accord at all points with the present disease. To Sampietro the resemblance of the fever to that of pappataci appears striking. Moreover he points out that the insects of transmission may not have been recognized everywhere; they may easily escape observation and their habits are imperfectly known to us. The possibility of another mode of transmission should also be remembered, namely direct contact (naso-pharyngeal and tracheal secretion). This may have permitted the disease to spread to localities from which the sand flea is habitually absent.

Grippe in Spain.

[Communication addressed to the International Office of Public Hygiene by Dr. Manuel Martin de Salazar, Inspector General of Public Health for the Ministry of the Interior, at Madrid.]

During the last two weeks in May, 1918, and almost simultaneously with the presence of a large number of visitors to the city, there was observed at Madrid a considerable increase in the number of cases of sickness, exceeding to an extraordinary degree the figures furnished by the statistics of previous years.

On the information thus far at hand it may be stated that from the beginning of the outbreak the disease appeared to have the characteristics proper to all the epidemics recorded in history under the name of influenza, grippe, or trancazo (beating with sticks). The great infectivity of the disease, its short duration, and its relatively benign character, are marked features. It was at first surprising that the epidemic appeared to prevail only at Madrid without being transmitted to other communities. But the inspector general of public health was soon informed that the epidemic had spread rapidly to the provinces, presenting the same characteristics as at Madrid; the same power of dissemination, the same relative benignity, even the same short duration and identical proportions in hospitals, and that it followed in its progress and propagation the ordinary routes of travel and communication. The clinical course of the disease is about as follows: After one to three days of malaise, headache, in some cases epigastric burning and undefined chill, but in most cases

without these premonitory symptoms, fever appears, accompanied by dryness and turgidity of the skin, intense headache with tendency to vertigo and pains in the limbs, particularly the joints. The fever rises in the space of a half day, to 40° or even 41° Centigrade. To these febrile phenomena are added the usual symptoms of anorexia, a coated tongue, intense thirst, and marked epigastric sensitiveness. All these symptoms persist for three or four days, in general for three days, rarely for a longer period. Then, following abundant perspiration or nose bleed, and often of diarrhea, these symptoms show a marked decline and only the pain in the joints and a general feeling of weakness persist. From this moment the patient enters on the period of convalescence, although this may be interrupted by relapses of short duration.

The present epidemic of grippe has exhibited two principal forms, one of which may be termed rheumatoid and the other catarrhal. These varieties have exhibited as common characteristics sudden onset, with great elevation of temperature, intense headache, convulsive muscular and articular pains, a rapid cycle of evolution, and great weakness in convalescence, which persists quite a long time.

The rheumatoid form has generally been benign except for complications involving the kidneys and heart (these manifestations being, however, more frequent in the other form) while the catarrhal form has generally presented a much graver type of illness, sometimes developing with fatal results into pneumonia and broncho-pneumonia.

So far as laboratory research is concerned, microscopic examination of the sputum of patients has shown (in addition to a multiplicity of germs seemingly of varied origin) the constant presence of a short bacillus, isolated or in the form of diplo-bacilli or of strepto-bacilli in small chains. The almost constant presence of two abundant streptococci was also observed, one large and the other small. Finally, there has been found, with relative frequency and, so to speak, in a state of pure culture, the classic bacillus of Pfeiffer. If at first the existence of this bacillus has not been clearly apparent (perhaps on account of faults of technique and as a result of the frequent associations which conceal its presence), it has been finally verified in the greatest number of cases in a very definite manner.

Demographically the salient facts brought out by statistical data in regard to the epidemic are as follows: The sharp increase of morbidity began May 27, after three days of slight accentuation in the number of deaths, and attained the highest figure, 115 deaths, on May 31. This is double the normal average for this period of the year. During the first eight days of June the deaths varied between 95 and 100, with a tendency to diminish, which became more accentuated during the second week in June.

Another fact brought out very clearly by the demographic studies is that the sharp increase of mortality was produced in the respiratory affections and chronic cardiopathies, especially the former, and in these the tuberculous affections have paid the highest toll to the epidemic.

Another observation is deduced from the tables according to age. Mortality was proportionately less high among children and old men and greatest among adults from 20 to 39 years of age, to which class its attacks were almost exclusively directed.

Conclusions.

1. Without any doubt, the epidemic, judged by the clinical picture and by laboratory researches, has been frankly of grippal origin.

2. Its powers of expansion and dissemination have been much remarked and very considerable; also its short duration and relative benignity. From this point of view it has presented a contrast to the epidemic of the year 1889 [1] which was invested with a much graver character, the differences being due to the different period of the year in which the epidemics occurred.

3. The great power of diffusion of the epidemic has been observed to be most marked in places in which a great number of persons have assembled daily, notably in barracks, theaters, central postal and telegraph offices, workshops, and industrial localities, where a large number of persons congregate during fixed hours.

4. The greatest number of cases were among adults from 20 to 30 years of age; on the other hand, in children under 5 years and in old men the disease has been very rare.

5. Those most heavily struck by the disease have been the cardiacs and the tuberculous; the latter have paid the heaviest tribute to the disease.

A SECOND EPIDEMIC IN SPAIN?

Through the Consular Service, the United States Public Health Service is kept informed concerning the prevalence of the more important communicable diseases throughout the world. In connection with the account already given concerning epidemic influenza in Spain in May and June, the following excerpt from a report forwarded through official channels by the American consul at Valencia, Spain, is of the highest interest. Attention is particularly called to the date of the report, namely, September 21, 1918.

"I have the honor to inform you that in this Province, as in all the rest of Spain, an epidemic has developed which in some towns has assumed an alarming character, more than 1,000 cases appearing in one town of 3,000 inhabitants. I proceed to relate the data which

[1] On the pandemic of grippe of 1889–90, see a note appearing in Vol. XXII (1892) of the Recueil des Travaux du Comité Consultatif d'Hygiène publique de France, p. 75.

I have been able to obtain relative to said disease, which it has not yet been possible to diagnose exactly, but which appears to be highly contagious.

"It also appears that in the municipal laboratory a microbe has been isolated by Dr. Colvèe which is always found in the sputum and sometimes in the blood of those attacked by the disease in question. Dr. Colvèe refuses to give any details of this pathogenic agent, stating that he is still engaged in his study of the disease, and is making microphotographic studies and experiments on animals in said laboratory. It is also stated that the sputum is the principal infecting material, and that all the measures possible for the sterilization of sputum will be beneficial in limiting the spread of the disease.

"It is declared that the disease is one whose pathogenic agent has not yet been certainly discovered in Spain, nor in many other countries in which attempts have been made to investigate it."

BACTERIOLOGY OF EPIDEMIC INFLUENZA IN GERMANY.

Following is a summary of several articles and discussions appearing in some of the German medical periodicals this summer. (Deutsche med. Wchnschr., 1918. Vol. 44, pp. 775, 808, and 863. Editorial notes, München, med. Wchnschr., 1918. Vol. 65, p. 804.)

The pandemic of influenza has not spared any single part of Germany. The clinical course does not seem to differ from that run by the disease in this country. Relapses and fatal pneumonias are particularly noted. The clinical picture is declared to be identical with that of the last pandemic of 1889. At a special meeting of the Munich Medical Society on July 9 it was brought out that it is mainly persons under 30 years of age who fall victims to the disease; this was explained by a survival immunity in the elder generation. Bacteriological studies showed that Pfeiffer's bacillus was found only exceptionally; streptococci, and occasionally pneumococci, were recovered from the sputum, organs, and blood of patients. Similar findings were recorded in 1889, so that the present findings are in keeping with precedent. Attention is called to the fact that Pfeiffer's bacillus was not found until 1892, although it should have been impossible to overlook it in 1889; hence it may well be that we shall find that Pfeiffer's bacillus is not related to the present epidemic. Various observers report finding of influenza bacilli in current cases but not uniformly. Gruber of Munich says "Influenza bacilli not found yet—investigations proceeding." Friedmann of Berlin finds that the symptomatology and complications correspond exactly with those of 1889–90. He has not found the Pfeiffer's bacillus; streptococci and pneumococci being the most

common agents of the complicating pneumonias. Uhlenhuth so far reports the same contradictory results from Strassburg.

The university clinic of Budapest telegraphed August 1 that the bacteriological investigations of some 200 cases had demonstrated Pfeiffer's bacillus as the cause of the outbreak.

Under the date of July 18 Kolle reported from Frankfurt his failure to detect Pfeiffer's bacilli in any of the few cases which he had thoroughly examined. In practically all cases, however, there were found large numbers of Gram positive coccus—often in a pure culture or in symbioses with pneumococci. The diplococcus tended to develop involution forms and to grow in very long chains in the condensation water. He regards them as agents of a secondary infection and believes that the "Spanish disease" may not be identical with the pandemic influenza of 1889 to 1893.

BIRTH STATISTICS, UNITED STATES BIRTH REGISTRATION AREA, 1916.

According to an advance summary of a report, "Birth Statistics in the Registration Area of the United States, 1916," issued by Director Sam L. Rogers of the Bureau of the Census and compiled by Dr. William H. Davis, chief statistician for vital statistics, 818,983 infants were born alive in 1916 in the United States registration area for births. This area, which comprises the six New England States, New York, Pennsylvania, Maryland, Michigan, Minnesota, and the District of Columbia, had an estimated population of 33,000,000, or about 32 per cent of the total population of the United States, so that the 818,983 births represented a rate of 24.8 per 1,000 of population. The total number of deaths in the same area was 486,682, or 14.7 per 1,000. The births thus exceeded the deaths by more than 68 per cent. For every State in the registration area, for practically all the cities, and for nearly all the counties, the births exceeded the deaths, usually by substantial proportions. The mortality rate for infants under one year of age averaged 101 per 1,000 living births.

Comparison with 1915.

The birth rate for the entire registration area fell below that for 1915 by one-tenth of 1 per 1,000 population, while the death rate exceeded that for 1915 by seven-tenths of 1 per 1,000. The excess of the birth rate over the death rate for 1916, 10.1 per 1,000, was thus a little less than the corresponding excess for 1915, which was 10.9 per 1,000. If the birth and death rates prevailing in the later year were to remain unchanged, and if no migration were to take place to or from the area to which they relate, its population would